PRS5
PREDICTORS OF WILLINGNESS TO QUIT CIGARETTE SMOKING IN A COHORT OF ADULTS IN INDIA
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OBJECTIVES: With 182 million smokers living in India, cigarette smoking is a serious public health problem associated with severe morbidities and significant economic burden. As willingness to quit smoking has been found to be associated with smoking cessation; the main objective of the study was to examine the predictors of willingness to quit smoking in a cohort of adults in India. **METHODS:** A cross-sectional study was conducted among adults aged ≥18 years in metropolitan cities in India. Participants completed self-reported questionnaire about socio-demographic variables, smoking status, smoking status of peers, history of past quit attempts, addiction level and attitudes towards smoking. Study cohort consisted of individuals who smoked at least one cigarette in the past 30 days. Outcome variable was willingness to quit smoking. Variables that were found significant (p<0.05) in bivariate analyses were included in multivariate logistic regression models to determine predictors of willingness to quit smoking. **RESULTS:** Out of 761 participants, 469 respondents (61.6 %) were smokers and 253 (54%) of smokers were willing to quit smoking. Regression showed that higher willingness to quit smoking was associated with group of age 40-49 years (OR:2.41, 95%CI: 1.19-4.90), religion Muslim (OR:0.46, 95%CI: 0.25-0.83) or Christian (OR: 0.41, 95%CI: 0.22-0.76), close friend (OR:2.23, 95%CI: 1.40-3.57) and siblings (OR:3.06, 95%CI: 1.95 - 4.78) being non-smoker , higher number of smoking friends (OR:1.85, 95%CI: 1.05-3.24) and previously tried to quit smoking 3 times (OR:2.30, 95% CI: 1.36 - 3.87) or more than 3 times (OR:22.89, 95%CI: 5.27-99.32). All reported values are statistically significant (p<0.05). **CONCLUSIONS:** Our study identified significant predictors of willingness to quit smoking among a cohort of adults in India. Intervention strategies should be developed considering targeted programs to address opportunities for individuals willing to quit smoking.

PRS6
EXCESS RISKS AND COSTS OF INVASIVE PNEUMOCOCCAL DISEASE AND PNEUMONIA AMONG US PERSONS WITH UNDERLYING MEDICAL CONDITIONS
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OBJECTIVES: Presence of underlying medical conditions is believed to increase risk of pneumococcal disease (PD) across all age groups. However, excess risks of PD attributable to specific conditions are not well known in children or adults, nor are condition-specific attributable economic costs. **METHODS:** Using health care claims information from ~80 million persons annually, plan members during 2007-2010 were stratified into subgroups based on presence of selected "at-risk" chronic conditions (eg, heart, lung, and liver disease, asthma, diabetes) and "high-risk" immunocompromising conditions (eg, malignancies, HIV, chronic renal disease). At-risk and high-risk conditions, and episodes of invasive pneumococcal disease (IPD) and all-cause pneumonia (PNE), were identified via diagnosis, procedure, and drug codes. Annual PD rates and PD-attributable health care costs (2010US$) among at-risk and high-risk persons versus age-matched healthy counterparts were compared using incidence rate ratios (IRR) and cost ratios; corresponding 95% CIs were estimated using Poisson regression and nonparametric bootstrapping. **RESULTS:** Annual rates of IPD and PNE were consistently higher among at-risk persons (IRR=3.8 [95% CI 3.5-4.0] and 4.5 [4.5-4.6]) and high-risk persons (IRR=9.3 [8.6-10.0] and 8.2 [8.2-8.3]) versus their healthy counterparts. Rates were notably high for at-risk persons with asthma (IRR=3.2 [2.8-3.7] and 4.4 [4.4-4.5]), diabetes (IRR=3.8 [3.5-4.2] and 4.6 [4.5-4.6]), or ≥2 at-risk conditions (IRR=8.5 [7.8-9.2] and 10.6 [10.6-10.7]). Annual PD-attributable health care costs totaled $56.1 million per 100,000 at-risk person-years and $118.9 million per 100,000 high-risk person-years, which were 5.2 [5.1-5.2] and 11.0 [10.9-11.0] times higher than corresponding costs for healthy persons. **CONCLUSIONS:** Rates and costs of PD are substantially higher among persons with certain chronic and immunocompromising conditions versus those without any such conditions. Rates and costs for persons with asthma and diabetes were especially increased, and rates and costs for individuals with ≥2 at-risk conditions approached those among persons with high-risk conditions.

PRS7
THE EFFECT OF SMOKING ON HEALING OF TIBIA FRACTURES: A BAYESIAN META-ANALYSIS
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OBJECTIVES: To optimize decisions on initial fracture treatment it is of interest to identify patients at risk for delayed bone union. The current study aimed to estimate the impact of smoking on the rate of union of tibia fractures. **METHODS:** A systematic literature search (1990–2012) was performed using the Cochrane library, Medline and Embase to identify studies that evaluated the effect of smoking on healing of 'fresh' tibia fractures. The endpoint of interest was the hazard ratio (HR) of bone union between smokers and non-smokers. Reported and calculated HRs were pooled applying a Bayesian random effects analysis. **RESULTS:** Six observational studies were identified all reporting favorable time to union for non smokers relative to smokers. One study was excluded from the meta-analysis as it did not allow for estimating a HR. One study reported an adjusted HR, whereas four other studies reported mean or median time to union. For these latter studies, HRs were estimated assuming constant hazard rates for bone union from week 7 following surgery. The analysis demonstrated that the rate of bone union was delayed in smokers relative to non-smokers, mean HR: 0.74, 95% credibility Interval (CrI): 0.65-0.85, corresponding to a >99% probability of delayed bone union in smokers, with a mean (95% CrI) delay of 3.0 (2.9-3.2) weeks. The current analysis has limitations which relate mainly to the observational nature of the included studies as well as the distributional assumptions required for estimating HRs. A sensitivity analysis excluding 1 study reporting the most favorable results for non-smoking still indicated a >99% probability of slower bone union in smokers as compared to non-smokers. **CONCLUSIONS:** The current study indicates that patients that smoke are at increased risk for delayed healing of tibial fractures and an evaluation of initial adjunctive treatment in these patients may be merited.

PRS8
DOES AN ECZEMA DIAGNOSIS IN CHILDREN UNDER THE AGE OF THREE PREDICT A SEVERE ASTHMA DIAGNOSIS: A UK RETROSPECTIVE ANALYSIS?
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There is evidence to suggest that young children with eczema are predisposed to developing asthma in their early life and it is proposed that previous eczema diagnosis could predict a more severe form of subsequent asthma. Therefore, it is vital to consider measures and policies to influence the pathogenesis of this disease. **OBJECTIVES:** To explore whether prescription data can identify those eczema patients at greater risk of developing severe asthma as early as possible in their atopic disease pathogenesis. **METHODS:** Using UK prescription data from IMS-Disease AnalyzerTM two case-controlled cohorts were extracted and analysed. The cohorts consisted of 20,095 and 5,840 patients respectively. **RESULTS:** The odds of a child with eczema having asthma before the age of 13 were 2.6 times greater (p<0.001; 95% CI 2.5-2.8) than a child who had no eczema at the same age. When comparing patients classified as having severe eczema, the odds of developing severe asthma before the age of 13 were 1.7 times greater (p<0.001; 95% CI 1.5-1.9) for children who had eczema before their third birthday than those who had no eczema born in the same year. The analysis of prescription data were restrictive in the electronic record so assumptions and the additional criteria imposed during analysis may have introduced bias. **CONCLUSIONS:** Severity in asthma patients in the UK have now come to the forefront of discussion at many levels - patients, health care professionals and government. The burden of morbidity of atopic disease could be influenced in a downward fashion if greater efforts and resources were focused at national level to improve the plight of patients and ensure efficient use of the scarce health care resources available. Robust cost-effectiveness analyses are required to argue the case for expenditure on this neglected area.

RESPIRATORY-RELATED DISORDERS – Cost Studies

PRS9
BUDGET IMPACT ANALYSIS OF BALLOON DILATION AND FUNCTIONAL ENDOSCOPIC SURGERY – A US PAYER PERSPECTIVE
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OBJECTIVES: Legislators, health system administrators, employers and other stakeholders are increasingly concerned about growing health care costs. Technologies must therefore continue to demonstrate safety and effectiveness alongside sound economics. Surgical tools for balloon catheter dilation (BCD) of sinus ostia offer an alternative way for surgeons to treat patients with chronic rhinosinusitis (CRS) in a tissue-sparing fashion. In some instances, these tools are also used alongside rigid instruments during functional endoscopic sinus surgery (FESS). BCD has strong safety and effectiveness evidence and allows migration of site of care from the operating room (OR) to the physician office. However, limited data exist analyzing the economic impact of the technology on CRS cost of care. **METHODS:** A budget impact analysis (BIA) was developed to determine the potential impact of BCD on health care costs. The analysis was performed from the viewpoint of the US payer and actual payments for health care services were included in the model, in lieu of costs. Inputs included frequency of service and payments for preoperative care and surgery; frequency, type of visits and procedures and payments for postoperative care (including debridements and related procedures), and payments and frequency of reoperations and exacerbations. Clinical inputs were based on published literature and analyses of claims databases from Marketscan, using a cohort with at least 2 years of continuous enrollment post-index. Monte Carlo simulations were conducted to determine impact of uncertainty on final estimates. **RESULTS:** For 1,400 surgical cases (expected surgical volume within a 1 million population), the total cost of care over 2 years assuming current treatments was estimated at US$ 14.23±0.26 million. Assuming however that 20% patients transition from FESS to BCD and 10% thereof would be treated in the office versus the OR, total cost would reach US$13.92±0.22 million. **CONCLUSIONS:** For well selected patients, shifting site of care from the OR to the office, along with the less-invasive BCD technology versus FESS, shows trends of cost favorability over a 2-year time horizon.

PRS10
ESTIMATING THE BUDGET IMPACT OF ADDING OMALIZUMAB TO STANDARD THERAPY IN PATIENTS WITH UNCONTROLLED SEVERE ALLERGIC ASTHMA FROM PRIVATE HEALTH CARE SYSTEM PERSPECTIVE IN BRAZIL
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